

CURRICULUM VITAE

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Qualifications:

1994 - 1999 Ph.D University of East Anglia, Norwich, UK, 1999 'A study of mitochondrial-like DNA in *Podisma pedestris* and other grasshoppers'.
1991 - 1994 Genetics BSc., University College London, UK, 1994

Current Position:

2002 - present Postdoctoral fellow in the Evolutionary Genomics Department, DOE Joint Genome Institute.

Research experience:

2002 – present **Postdoctoral research. Joint Genome Institute (Supervisor: Dr J.L. Boore).**
Overseeing the complete genome sequencing, assembly and comparative analysis of *Phytophthora sojae* (soy bean blight) and *P. ramorum* (sudden oak death).

2001 - 2002 **Postdoctoral research. Stanford University (Supervisor: Dr D.A. Petrov).**
Estimated the rates of DNA duplication and of mtDNA insertion in the human nuclear genome by developing a novel approach to genome analysis that ties genomic changes to primate mtDNA phylogeny, and thus to a detailed fossil record. The rate of DNA duplication is of an order that suggests it is of major importance in genome evolution, and the rate of mtDNA insertion establishes mtDNA as a constant source of new mutations that could be utilised as population genetic markers or to study the direct effects of such insertions. This project provided a training in perl programming and bioinformatics.

2000 **Postdoctoral research (Royal Society -Fulbright Fellow). Harvard University. (Supervisor: Prof. D.L. Hartl).**
Studied the difference in the rates of DNA loss through small-scale insertion and deletion mutations in a large-genomed insect, compared to insects with smaller genomes. Explored individual and population differences in nuclear mitochondrial pseudogene number for grasshoppers. Reviewed eukaryotic nuclear mitochondrial pseudogenes (www.pseudogene.net).

1999 **Royal Society and British Association Millennium fellowship communicating Science.** One year full-time work communicating science underlying issues in genetic engineering to the public, UK non-governmental organisations, and local community groups during the height of public debate on GMOs. This included invited participation in many public debates; writing and editing of scientific briefings for a lay audience; responding to telephone, email and letter enquiries.

1994 - 1999 **PhD research. University of East Anglia. (Supervisor: Prof. G.M. Hewitt)**
This involved the discovery, identification and study of nuclear mitochondrial pseudogenes. DNA sequencing techniques were used to study the mechanisms generating them, to study neutral mutation and to compare nuclear and mitochondrial rates of evolution. A provisional biogeography of the study organism was inferred after the development of an RFLP based approach to study multiple loci simultaneously.

1993 - 1994 **BSc research. University College London. (Supervisor: Prof. A. Pomiankowski)**
Literature based research project on the evolution of genomic imprinting.
Institute of Zoology, London (Supervisor: Prof. M.W. Bruford)
Laboratory based research project involving the use of microsatellite techniques.

Grants and awards:

2000 Royal Society - Fulbright Postdoctoral Fellowship (£25,000)
1999 Millennium Award from The Royal Society and British Association (£10,000)
1997 - 1998 University of East Anglia (£2,700)

Teaching and science communication:

1998 – 2000 Invited participation in several public debates on genetically modified crops.
1999 Invited MSc seminar at the University of East Anglia on genetically modified crops and biodiversity. Writing and editing science briefings for a general audience.
1994 – 1997 Seminars, demonstrating and marking at the University of East Anglia. Subjects: meiosis and mitosis; simulation of genetic drift, selection and mutational drive; history of scientific ideas; evolution and behaviour; molecular biology; ecology; computing, maths and statistics.
1994 Part-time work for the BBC, through the Broadcasting Support Services, researching and answering questions on genetics from the public, during the launch of Science Line.

Meeting presentations and invited seminars:

2003 Society for Molecular Biology and Evolution, Irvine, California, USA
2003 Society for the Study of Evolution, Chico, California, USA
2002 European Bioinformatics Institute, Hinxton, UK (invited).
2001 University of East Anglia, Norwich, UK (invited)
2000 New England Molecular and Evolutionary Biology, Cambridge, USA
2000 Society for Molecular Biology and Evolution, New Haven, USA
1998 Queen Mary College, London, UK (invited).
1997 Annual Meeting of the American Society of Naturalists, the Society for the Study of Evolution and the Society of Systematic Biologists, Boulder, Colorado, USA.
2002, 2001, 1998, 1997, 1996 Population Genetics Group Meeting, UK

Publications:

Bensasson, D., Boore, J. L. Nielsen, K.M. (invited, in review) "Genes without frontiers." *Heredity*.

Bensasson D., Feldman, M. W., & Petrov, D.A. (in press) "Rates of DNA duplication and mtDNA insertion in the human genome" *J. Mol. Evol.*

Nielsen, K.M., Choi, M., Pietramellara, G., D. Nannipieri, P. Bensasson D. (in press) " Extracellular DNA: persistence in various environments and availability to bacteria" *Advances in Microbial Ecology Vol. 17*, B. Schink, W. Vincent, J. D. van Elsas, eds.

Petrov, D.A., Aminetzach, Y.T., Davis, J.C., Bensasson, D., Hirsh, A.E. 2003 "Size matters: non-LTR retrotransposable elements and ectopic recombination in *Drosophila*". *Mol. Biol. Evol.* 20(5) 880-892.

Bensasson, D., Zhang, D-X., Hartl, D.L., Hewitt, G.M. 2001 "Mitochondrial pseudogenes: evolution's misplaced witnesses". *Trends Ecol. Evol.* 16(6) 314-321.

Bensasson, D., Petrov, D.A., Zhang, D-X., Hartl, D.L., Hewitt, G.M. 2001 "Genomic gigantism: DNA loss is slow in mountain grasshoppers." *Mol. Biol. Evol.* 18(2) 246-253.

Bensasson, D., Zhang, D-X. & Hewitt, G.M. 2000 "Frequent assimilation of mitochondrial DNA by grasshopper nuclear genomes." *Mol. Biol. Evol.* 17(3) 406-415.

Languages English, Greek (fluent), French.

Referees

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